Appendix A.

Draft Land Protection Plan: California Foothills Legacy Area

Appendix A
Land Protection Plan

Proposed Establishment
California Foothills Legacy Area
Mariposa, Merced, Stanislaus, and Tulare Counties, California

United States Department of the Interior
U.S. Fish & Wildlife Service

The conservation of biodiversity in the Central Valley and surrounding foothills is inextricably linked to the continuation of private working landscapes and the sustainable stewardship of private grasslands by ranchers *(Kroeger 2009).*

Land Protection Plan
Proposed Establishment

California Foothills Legacy Area

Mariposa, Merced, Stanislaus, and Tulare Counties, California

Prepared by

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Tracy Schohr

Cattle Grazing in An Oak Woodland

Chapter 1 – Introduction and Project Description

California's Great Central Valley is surrounded by nearly 14 million acres of foothill rangelands. Lands within this "Rangeland Ring" are predominantly private working ranches that include a rich and varied landscape of grasslands, oak savanna and woodlands, vernal pools, riparian areas, and wetlands. These rangelands provide a home for a breathtaking diversity of wildlife, including numerous imperiled species. The State's large rangeland areas provide continuous open space critical for wildlife movement and ecological function (CDFG 2007; Spencer *et al.* 2010). Yet of all the major habitats in California, rangelands are among the least protected.

In an effort to conserve these working rangelands and the wildlife they support, the U.S. Fish and Wildlife Service (Service) proposes to launch a new conservation easement program called the California Foothills Legacy Area (CFLA). This easement program would provide a new tool to help ranching families stay on their land while permanently protecting a portion of this important resource for wildlife. The proposed program would be completely voluntary. No new regulatory requirements would be placed on lands within or outside the program area. Ranches within three areas of the Rangeland Ring would be eligible for the program, depending on which alternative is selected: central Sierra Nevada foothills within Stanislaus, Merced, and Mariposa counties; southern Sierra Nevada foothills within Kern and Tulare counties; and the portion of the Diablo Range within Stanislaus, Merced, and San Benito counties.

Purposes

The purpose of the CFLA is to conserve working rangelands that are of high value to wildlife. Congress has given the Service general authority to acquire lands for different purposes. The laws and associated purposes relevant to the proposed CFLA easement program are:

"…for the development, advancement, management, conservation, and protection of fish and wildlife resources...." 16 U.S.C. 742f(a)(4) (Fish and Wildlife Act of 1956)

"... conservation, management, and ... restoration of the fish, wildlife, and plant resources and their habitats ... for the benefit of present and future generations of Americans..." 16 U.S.C. 668dd(a)(2) (National Wildlife Refuge System Administration Act)

Our Vision for the California Foothills Legacy Area

A network of privately owned and managed rangelands that are permanently protected through voluntary conservation easements held by the Service and a variety of land trusts, conservation organizations, and other agencies. These rich and varied rangelands including grasslands, oak woodlands, vernal pools, riparian areas, and wetlands will support economically viable family-owned ranching operations for generations to come. Grazing and other stewardship practices of ranchers will provide habitat for sustainable populations of migratory birds and other wildlife and contribute to the recovery of imperiled species.

Goals

Three overarching goals were developed for the proposed California Foothills Legacy Area. The goals are intentionally broad, descriptive statements of the desired future conditions. They embrace the proposed purposes and vision statement.

1. Conserve and maintain the existing diversity of grasslands, oak woodlands, vernal pools, riparian areas, and wetlands in the foothill rangelands surrounding the Central Valley and the diversity of migratory birds and other wildlife they support.

2. Contribute to the recovery of threatened and endangered species on California rangelands, and reduce the likelihood of future listings under the Endangered Species Act.

3. Support the long-term viability of the ranching industry by promoting opportunities for ranchers to participate in voluntary rangeland conservation efforts and provides incentives for cooperation.

Alternatives

Following are descriptions of the No Action Alternative (Alternative A) and two action alternatives (Alternatives B and C) for implementing the proposed CFLA. Table 1 describes the areas eligible for the proposed program under the three alternatives and Table 2 summarizes the proposed easement acquisition goals by county for each alternative.

Alternative A - No Action

Under the no-action alternative, we would not establish the CFLA. Other agencies and organizations likely would continue to acquire conservation easements on rangelands within the study area, subject to availability of funding. Nevertheless, most rangelands within the study area would remain under private ownership and would lack any form or permanent protection. If recent trends continue as expected, many ranches with high wildlife value would be converted to other land uses and their habitat values would be permanently lost.

Alternative B – Implement Rangeland Conservation Easement Program in Four Counties (Preferred Alternative)

Under Alternative B, we would establish a new conservation easement program focused on rangelands bordering the San Joaquin Valley, within the central and southern Sierra Nevada foothills and the central Diablo Range. Program eligibility would be limited to rangelands within Merced, Mariposa, Stanislaus, and Tulare counties. Within the program area, the Service would seek to acquire up to 200,000 acres of perpetual rangeland conservation easements from willing sellers. The program would not involve fee-title acquisitions. Grazing and other ranching operations would continue on lands included in easement contracts. All land within an easement would remain in private ownership and, therefore, property tax and management activities would remain the responsibility of the landowner. Landowners would also continue to control access to their lands. Easement restrictions could include, but would not be limited to significant alteration of the natural topography, conversion of rangeland vegetation to cropland, construction of structures unrelated to ranching, and subdivision of ranch parcels. For more details about activities that would likely be permitted and restricted under the easement, see the Easement Template and Questions and Answers (Appendix B).

Alternative C – Implement Rangeland Conservation Easement Program in Six Counties

Under Alternative C, we would establish a new conservation easement program focused on rangelands bordering the San Joaquin Valley, within the central and southern Sierra Nevada foothills and the central Diablo Range. This alternative would be similar to Alternative B, with a few exceptions. In addition to the eligible program counties under Alternative B (Merced, Mariposa, Stanislaus, and Tulare counties), Alternative C also would include rangelands within San Benito and Kern counties (Sierra Nevada foothills only). Within the program area, the Service would seek to acquire up to 325,000 acres of rangeland conservation easements from willing sellers.

Table 1. Summary of Proposed Easement Program Area

		Eligible Counties	
Rangeland Areas	*Alternative A*	*Alternative B*	*Alternative C*
Central Sierra Foothills (>200 ft. elev.)	n/a	Merced Mariposa Stanislaus	Merced Mariposa Stanislaus
Southern Sierra Foothills (>500 ft. elev.)	n/a	Tulare	Tulare Kern
Diablo Range (>200 ft. elev.)	n/a	Merced Stanislaus	Merced Stanislaus San Benito
Total Easement Acquisition Goal (acres)	n/a	200,000	325,000

Table 2. Summary of Estimated Easement Acquisition Acreage by Eligible County

County	*Alternative A*	*Alternative B*	*Alternative C*
Tulare	n/a	35,000	35,000
Mariposa	n/a	35,000	35,000
Stanislaus	n/a	60,000	60,000
Merced	n/a	70,000	70,000
Kern	n/a	0	55,000
San Benito	n/a	0	70,000
TOTAL	0	200,000	325,000

Figure 1. Counties with Potential CFLA Program Areas.

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Cattle and Geese Grazing Near A Vernal Pool

Chapter 2. Priority Resources

Wildlife Resources

Migratory Birds

California's rangeland habitats are extremely important to migratory birds. This is evidenced by the 34 National Audubon Society-designated Important Bird Areas (IBAs) that are partly or completely within the Rangeland Ring. The potential CFLA program area contains all or major portions of eight IBAs, including two which have a global designation: the La Grange - Waterford Grasslands (Sierra Foothills) and Panoche Valley (Diablo Hills). Nearly 300 species of birds are predicted to occur within the Rangeland Ring and almost 90 percent of those are likely to be found in the proposed program area (CDFG 2008). Primary habitats in the Rangeland Ring are: grassland, oak woodland, and chaparral/scrub.

Grassland habitats also provide breeding habitat for a number of raptors, including northern harrier, Swainson's hawk, peregrine falcon, prairie falcon, burrowing owl, and short-eared owl. The endangered California condor, one of the world's rarest birds, forages within the study area in grasslands and oak savannahs, and breeds on rocky outcrops in savanna and scrub habitats. Nearly 70 species of perching birds also are predicted to occur in grasslands and savannas across the study area. In winter, large numbers of long-billed curlews, vesper and savanna sparrows, and horned larks are found in these habitats as well. Six priority grassland bird species were used to identify priority areas within the Rangeland Ring: loggerhead shrike, northern harrier, prairie falcon, burrowing owl, golden eagle, and California condor.

Oak woodlands are thought have the richest suite of wildlife species of any habitat in California, with over 330 species of birds, mammals, reptiles, and amphibians depending on them at some stage in their life (Verner 1980; Barrett 1980; Block and Morrison 1998). Oak woodlands may rank among the top three habitat types in North America for breeding bird richness (Verner 1983). California oak woodlands are especially rich in bird species. Approximately 110 species of birds can be observed during the breeding season (Verner 1980). Three species of oak woodland birds are endemic to California and Baja California, Mexico: Nuttall's woodpecker, yellow-billed magpie, and oak titmouse.

A variety of flycatchers, vireos, warblers, and many other species occur in montane hardwood and conifer forests. Canopy-dwelling species include olive-sided flycatcher, golden-crowned kinglet (winter only), and western tanager. Large snags and decaying living trees offer nesting cavities for western screech owl, pileated woodpecker, and northern flicker, and sap trees are used by a variety of woodpeckers, and the high-protein pine seeds are eaten by white-headed woodpecker, mourning dove, white-breasted nuthatch, red-breasted nuthatch, chestnut-backed chickadee, mountain chickadee, dark-eyed junco, spotted towhee, black-headed grosbeak, and evening grosbeak.

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Ferruginous Hawk

Numerous bird species either nest in foothill chaparral and shrub ecosystems or use them seasonally. Common breeding species include Anna's hummingbird, western scrub-jay, blue-gray gnatcatcher, wrentit, spotted towhee, California towhee, and lazuli bunting. Birds can be particularly abundant in foothill chaparral in winter, perhaps because the ecosystem lies below the snow zone and because many native shrubs, such as toyon, produce fruits that attract species such as American robin, cedar waxwing, Townsend's solitaire, hermit thrush, and varied thrush (irregular). Ruby-crowned kinglet and Hutton's vireo are typical wintering and resident insectivorous birds that primarily forage in evergreen foliage (Hunter et al. 2011).

Mammals

An estimated 116 species of mammals use the Rangeland Ring and nearly 90 percent of those are likely be found in the proposed program area (CDFG 2008). Mammals commonly found in foothill habitat include the black-tailed hare, California ground squirrel, Botta's pocket gopher, western harvest mouse, California vole, badger, coyote, desert cottontail, and deer (White *et al.* 1980). The endangered San Joaquin kit fox also is found in and adjacent to this habitat (U.S. Fish and Wildlife Service 1983). The rich rodent and lagomorph populations are an important food source for common predators including: bobcat and coyote. Montane Hardwood are valuable to migratory deer herds that find critical feeding and wintering habitat there, and other larger mammals that frequent this habitat include ringtail, raccoon, black bear, and mountain lion. A variety of smaller rodents and shrews favor the mix of shrub thickets and open patches (Mayer and Laudenslayer 1988). Foothill fresh emergent wetland are limited but are used by an unknown number of bat species including long-eared myotis, long-legged myotis, and Yuma myotis (Hunter et al. 2011). Five small mammal species are endemic and near-endemic species: the giant kangaroo rat, Heermann kangaroo rat, Santa Cruz kangaroo rat, Sonoma chipmunk, and the Suisun shrew.

Reptiles and Amphibians

At least 46 species of reptiles inhabit the Rangeland Ring with over three quarters of those predicted to use the proposed program area. Additionally, 35 species of amphibians are estimated to use the Rangeland Ring of which 22 reside in the proposed program area (CDFG 2008). Characteristic reptiles that breed in annual grassland habitats include the western fence lizard, common garter snake, gopher snake, yellow bellied racer, and western rattlesnake (Basey and Sinclear 1980), and the Pacific rattlesnake breeds in oak woodlands. The California red-legged frog has been protected as a threatened species by the Endangered Species Act since June 1996, and is the largest native frog in the western United States; this species remains fairly widely distributed but once ranged across much of California, including portions of the Sierra Nevada Mountain Range. Pacific tree frogs and western toads may be common in vernal pool complexes, and blue oak savanna woodland supports the California tiger salamander. Many amphibians and reptiles depend on riverine ecosystems; these include California newt, western toad, foothill yellow-legged frog, western terrestrial garter snake, western aquatic garter snake, and western pond turtle. Fresh emergent wetlands are limited but are used by California tiger salamander, western pond turtle, and the Federally-listed threatened giant garter snake. Bullfrogs and other non-native amphibians are common in shallow ponds and other permanent wetlands (Hunter *et al.* 2011).

Fish

The Rangeland Ring hosts 58 fish species with nearly 70 percent of these predicted to occur in the potential program area. Most of these species are native to California's Central Valley, while 23 are native to North America but have

been transplanted to California where they thrive (e.g., striped bass, channel catfish). At least 15 major rivers and numerous tributaries flow through the foothills area. Rivers are used as migration routes for fish and wildlife, and are important to maintain as migration corridors, particularly under the threat of climate change.

Streams draining into the Central Valley area contain four different groups or assemblages of fish species that are adapted to a definable habitat structure largely predicted by elevation/gradient, and associated environmental conditions such as flow and temperature. Moving from high elevation streams down to the valley floor, these include the rainbow trout assemblage, California roach assemblage, pikeminnow-hardhead-sucker assemblage, and deep-bodied fishes assemblage. The assemblages most common to the foothill ring include the California roach assemblage and pikeminnow-hardhead-sucker assemblage, although the higher elevation rainbow trout assemblage occurs artificially at the lower elevations in colder tailwaters flowing from dams (Moyle 2002).

The Rangeland Ring includes nearly 1,000 miles of streams designated critical habitat for the threatened Central Valley steelhead and over 500 miles of critical habitat for the Central Valley spring-run chinook salmon. This represents over 40% of the total critical habitat for both species. In addition, the Rangeland Ring includes significant portions of the critical habitat for other federal-listed salmonids, including the threatened South Central California Coast steelhead (352 miles), Southern California steelhead (226 miles), and Central California Coast steelhead (420 miles). A relatively small portion of this critical habitat occurs within the potential program area: California Central Valley steelhead (15 miles) and South Central California Coast steelhead (109 miles).

Threats to Rangeland Wildlife Resources

Rangelands face a variety of threats, including conversion to more intensive land uses such as urban and rural residential development, orchards, and vineyards; invasive species; climate change; and economic viability. Between 1984 and 2008, over 380,000 acres of California rangeland was converted to other uses (California Department of Conservation 2012). Figure 1 shows the sources of rangeland conversion during this time period. By 2048, the state's population is estimated to swell to more than 50 million people (California Department of Finance 2012). Seven of the top 10 fastest growing counties in California are Rangeland Ring counties. In total, the population of Rangeland Ring counties is projected to grow by 48% by 2050. Rangelands that were once home to cattle, soaring hawks, and majestic blue oaks are now home to subdivisions, ranchettes, and almond orchards. Two primary land use changes are conversion to more intensive agriculture and residential development.

Land use Change

Conversion to more intensive agriculture

While important for California's food supply and for export, many intensive agricultural practices for large-scale production affect wildlife and ecosystems because of loss and fragmentation of habitat, runoff of agricultural chemicals and sediment, and water consumption (CDFG 2007). Between 1984 and 2008, over 110,000 acres of

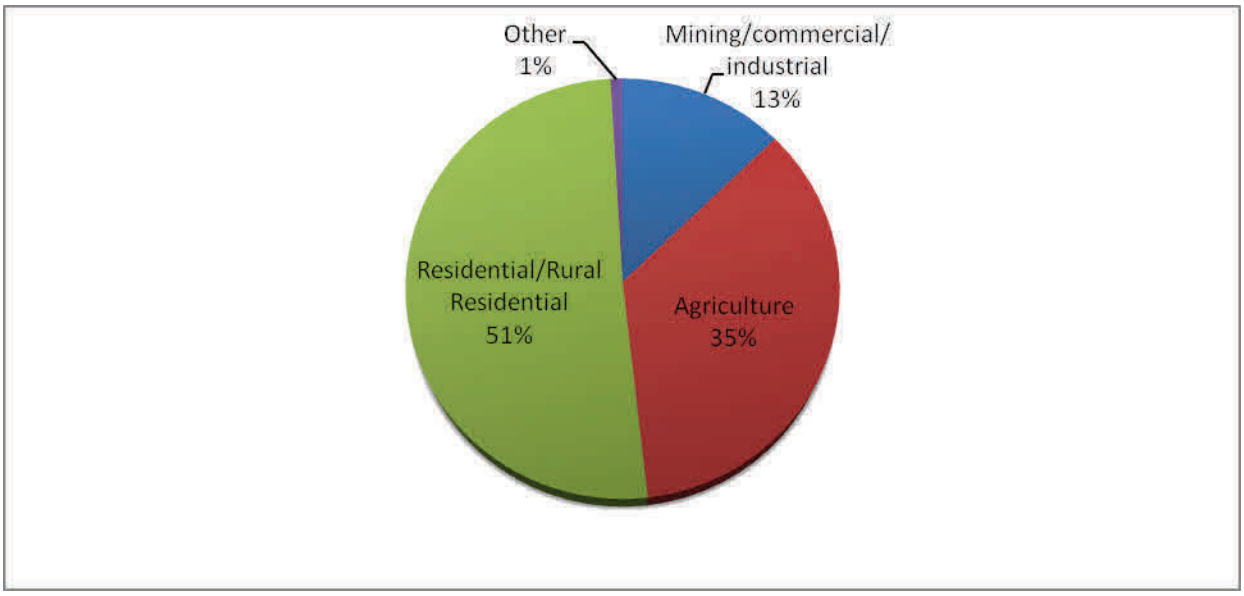

Figure 2. Sources of rangeland conversion in California, 1984-2008 (Marty *et al.* 2012).

rangeland were converted to more intensive agricultural production. Most of this conversion was to either orchards (34%) or vines and trellised olives (33%) (Marty *et al* 2012).

Agricultural land conversion has far exceeded urbanization as a cause of vernal pool habitat loss (Placer Land Trust 2009). Vernal pools (seasonally flooded landscape depressions underlain by a subsurface that limits drainage) are unique and highly threatened wetlands in California. They support numerous native plant and animal species that are specially adapted to this unique, ephemeral environment, including a relatively large number of threatened and endangered species (Cheatham 1976; Zedler 1987; Holland and Jain 1988). Some estimates place losses of vernal pool habitat in California at more than 90% (California Department of Fish and Game 1998), and they are thought to be among the most threatened wetland ecosystems in the state (Stone 1990).

Residential development

Conversion to urban/suburban residential and rural residential (exurban) development is the largest source of rangeland loss in the State. Between 1984 and 2008, nearly 160,000 acres of rangeland were converted to housing developments and ranchettes. Rural residential development accounted for over two-thirds of this total. Over the next decade, between 200,000 and 550,000 acres of undeveloped or underdeveloped land are projected to be required to accommodate the needs of new residents, and about 55% of this total will come from rangelands or other natural or near-natural land cover types (California Department of Forestry and Fire Protection 2010).

Exurban developments accommodate houses that are typically on lots 10-40 acres in size. They occupy about 25% of private land in the lower 48 states and are the fastest growing form of land use (Brown *et al.* 2005; Heimlich and Anderson 2001). In addition to causing removal of ground cover (habitat for native animals and plants), the existence of exurban developments brings about other human influences (e.g., cats, dogs, hobby livestock, night-lights, garbage, and ornamental landscaping (Mitchell *et al.* 2002). This presents challenges for wildlife and habitats.

Some wildlife simply avoid exurban development. Native species of conservation concern, such as the orange-crowned warbler, dusky flycatcher, Brewer's sparrow, and vesper sparrow, have reduced densities on exurban developments when compared to undeveloped lands (Hansen et al. 2005; Maestas et al. 2003; Odell and Knight 2001; Lenth et al. 2006). Foxes and coyotes have been shown to occur more frequently away from houses in developments (Odell and Knight 2001); some animals that remain near these developments face uncertainty, as dogs and cats are known to harass and kill wildlife and can expedite the local extinction of some species (Miller *et al.* 2001; Crooks and Soulé 1999).

Residential development creates a new demand for surface and groundwater sources. Consumed water—if returned to river systems through urban runoff, stormwater drains, etc.—can introduce pollution to the aquatic environment, fragmenting waterways and impeding their use as wildlife travel corridors.

Changes in vegetation community composition (e.g., larger, denser, areas of mixed oaks, conifers, and shrubs) may increase the probability of catastrophic wildfires, which can further degrade habitat quality (Wacker and Kelly 2004). Also, invasive species (weeds and animals) are introduced. In one Colorado study, there were over twice as many introduced plant species documented on exurban developments as on ranchlands (Maestas et al. 2002; Maestas et al. 2003).

Exurban development of rangelands can also hurt working ranches in the same region. Ranches require access to veterinarians, agricultural advisory services, processing facilities, and packing houses (Huntsinger and Hopkinson 1996). As lands are developed, there are fewer rural businesses to support this needed infrastructure. In one study of rural communities that were being developed, ranchers estimated an average of 10 neighboring ranches had been sold for development, and cited this as an important reason why they may sell their ranch (Sulak and Huntsinger 2002).

Energy and transportation infrastructure development

As California's population grows and expands into the rural environment, residents will need related infrastructure (e.g., roads; fences; places to work, shop, and recreate). They also will need power to fuel those homes and businesses. California Executive Order S-14-08 requires that California utilities reach the 33% renewable energy goal by 2020, which will require wind, solar, and other electricity generation projects and their associated transmission lines and infrastructure. If sited or managed poorly, these can lead to degradation and fragmentation of rangelands and mortality of birds and bats (Southern Sierra Partnership 2010).

Within the Rangeland Ring, the Southern Sierra Nevada and Tehachapi Mountains are one of the hotspots for energy development. This region has extraordinary wind resources, leading the State of California to target the Tehachapis as the priority area for wind energy development to meet the Executive Order's goal. The Tehachapi Range is recognized as a biological "hot spot" with a high number of endemic species and unusual assemblages of native species from four ecoregions (White 2003). For example, the largest documented migration of turkey vultures in the United States passes through the Southern Sierra Nevada and toward the areas proposed or being developed for wind energy (Southern Sierra Partnership 2010). This area is also very important to California condor and golden eagle.

FWS

Solar development on Rangeland

Invasive Species

Since the arrival of the first European settlers in California, non-native species have been introduced both unintentionally and purposefully to the state. More than 1,000 introduced plant species (Barbour et al. 1993) and more than 110 non-native fish and wildlife species now inhabit California (Grenfell et al. 2003; Moyle 2002). Those that disrupt or alter native ecological communities have negative consequences for native species and habitats and are considered invasive. California is remarkably vulnerable to species invasions, and almost all of the state's ecosystems are at risk (CDFG 2007).

Invasive animals out-compete native species for food, prey upon or disturb the habitat of native wildlife, and may spread diseases. Invasive plants out-compete native species for light, water, and soil; they also may offer inferior habitat and nutritional values for native animal species and alter ecosystem processes, such as natural fire regimes.

In the western United States, 126 million acres of rangeland are now dominated by invasive plants considered to be noxious weeds (Eviner et al 2010). There are more than 300 rangeland weeds in the United States, and they cause an estimated loss of $2 billion annually (Bovey 1987), more than all other pests combined (Quimby *et al.* 1991). Weed infestations reduce plant diversity, threaten rare and endangered species, reduce wildlife habitat and forage, alter fire frequency, increase erosion, and deplete soil moisture and nutrient levels (DiTomaso 2000). For example, yellow starthistle invasions can result in losses of soil moisture resources on invaded sites of 15-25% of mean annual precipitation. This decreases soil water availability for other plants and ultimately reduces downstream water flow. In California's Sacramento River watershed alone, the costs of lost water associated with yellow starthistle invasions are estimated at $16-75 million annually (Gerlach 2004).

Climate Change

Climate change may be the biggest concern for all of California's ecosystems. Current models predict overall temperature increases of 4 to 10.5 degrees Fahrenheit by the end of the century, accompanied by hotter, drier summers and warmer, wetter winters (Hayhoe et al. 2004; Schneider and Duriseti 2002; Turman 2002). In the Sierra Nevada, warmer temperatures will reduce the annual snowpack and result in earlier snowmelt. Spring and summer streamflows are projected to decline by as much as 25% by 2050 and 55% by the end of the century (duVair 2003).

Rising temperatures and altered precipitation will affect wildlife by decreased water availability and the conversion of existing habitats to other habitat types. In some areas this would mean loss of habitat types for wildlife persistence or migration, especially if a species is unable to move or has no new habitat to move into. Climate change will increase the vulnerability of wildlife to population loss and extinction. Some species may adapt by shifting their ranges independently of other species, and new species interactions may result in the decline or extirpation of species. By 2070, shifts in species' distributions may lead to dramatic changes in the composition of California's avian communities, such that as much as 57% of the state may be occupied by novel species assemblages (Stralberg *et al.* 2009).

Ranges for tree species may shift, too, typically to higher elevations and more northern latitudes (California Department of Forestry and Fire Protection 2010), and temperature changes can cause changes in the seasonal timing of flowering and budding (Penuelas and Filella 2001).

In February 2011, PRBO Conservation Science released a report with sobering projections about the effects of climate change on wildlife in various ecoregions of California. Some of the most dramatic include the possibility of thermal stress for species at the lowest elevations and/or those with narrow temperature tolerance levels; changes (some severe) in the timing of peak streamflows (flows earlier in spring), which may affect species sensitive to changes in seasonal phenologies and those dependent on a specific environmental trigger; and possible changes in vegetation communities (e.g., increases in oak, pine, chaparral, and montane hardwood vegetation) and a loss of conifer dominated vegetation (PRBO 2011).

Drier summers also may increase fire frequency and intensity. Over one-quarter of the wildlife habitat asset acres in California are at high or medium risk from uncharacteristic wildfire, which can have varied impacts on habitat, depending upon fire behavior, frequency, duration, seasonality, and landscape alterations (California Department of Forestry and Fire Protection 2010).

Economic Viability of Ranching

Nationwide, the net revenue after costs associated with livestock production has declined substantially since 2007. That year, the average net revenue was $140 per head, as compared to $80 per head during early 2012 (Speer 2012). Beef cattle ranchers' production expenses increased by 30% between 2002 and 2007. During this period, the largest increases in expenses were 31% for livestock (purchased or leased) and 45% for feed purchased (USDA 2010). Ranching operations surveyed in California reported that in 2009, 38% lost money, 19% broke even, and 42% made a profit. Of those that made a profit, 70% made less than $10,000 (UC Davis 2009). Nationwide, family operated cattle businesses, which make up 89% of all cattle producers, hold a majority of inventories (62%) yet collect a disproportionately small share of all sales (44%) (USDA 2010).

The California Land Conservation Act of 1965 (commonly referred to as the Williamson Act) is a land conservation program in which private landowners sign contracts with counties, promising to keep their land in agricultural use for set periods of time in exchange for reduced property taxes. In the past, the state has reimbursed counties for some of the lost revenue. However, since 2009 the state has effectively eliminated its payments to counties. Assembly Bill 2530, signed into law in October 2010, allows counties to voluntarily implement new contracts that are 10 percent shorter in return for a 10% reduction in landowners' property tax relief. The bill does not ensure the continuation of the Williamson Act beyond 2015 and its future is in question (Wetzel *et al*. 2012).

Some 42% of surveyed ranchers said they would sell some or all of their rangeland without Williamson Act property tax reductions (Wetzel *et al*. 2012). Their land is certainly worth more when used for intensive agriculture or housing than for rangeland. Along the Central Coast, oak woodlands are up to 10 times more profitable when planted in wine grapes and 100 times more profitable when developed for housing (University of California Agriculture 2007). If the economic viability of ranching continues to decrease and incentives to convert or sell land increase, significant areas of rangeland habitat will be lost, along with the wildlife that relies on it.

In addition, climate change predictions don't bode well for the industry—particularly because of predicted reductions in forage production (Shaw *et al.* 2011).

What is clear is that these and the many other challenges faced by all ranching operations are shared by not only the ranching community but all people who value high quality, healthy, abundant food and water, and having diverse well connected wildlife habitats in the Rangeland Ring.

Existing Rangeland Conservation Efforts

Conservation easements funded and/or administered by conservation agencies and land trust organizations protect thousands of acres of rangelands surrounding the Central Valley. These groups may have different objectives, focus areas, and/or partners, but all share the same core goal: to preserve California's landscapes for future generations. While not all-inclusive, this section highlights some programs that provide funds and/or facilitate conservation efforts in or near the Central Valley area. Currently, approximately 518,000 acres (3.7%) of the Rangeland Ring is permanently protected with conservation easements. Table 3 summarizes current easement holders with this area.

Federal

Through perpetual easements or 10- to 20-year rental agreements, the **NRCS Grassland Reserve Program** targets vulnerable grasslands that are subject to conversion to urban uses, cropland, or other non-grazing uses. The program assists agricultural producers in protecting the viability of grazing landscapes; participants must limit future development and cropping uses of the grassland while retaining the right to conduct common grazing practices

Table 3. Summary of Easement Holdings with the California Rangeland Ring.

Easement Holder	*Acres*
Land Trusts	
American Land Conservancy	16,950
American River Conservancy	3,300
Audubon Landowner Stewardship Program	6,580
California Rangeland Trust	39,890
Center for Natural Lands Management	300
Central Valley Farmland Trust	8,140
East Bay Regional Park District	1,870
Environmental Stewardship Foundation	140
Golden State Land Conservancy	2,630
Land Conservancy of San Luis Obispo County	60
Land Trust for Santa Barbara County	2,270
Land Trust for Santa Clara County	750
Land Trust of Napa County	21,890
Monterey Agricultural and Historical Land Conservancy	9,640
Muir Heritage Land Trust	140
Nevada County Land Trust	3,270
Northern California Regional Land Trust	1,580
Pacific Forest Land Trust	850
Placer Land Trust	5,050
Placer Legacy	2,230
Sacramento Valley Conservancy	12,450
San Benito Agricultural Land Trust	1,710
Save Mount Diablo	1,330
Sequoia Riverlands Trust	8,690
Shasta Land Trust	8,870
Sierra Foothills Conservancy	6,860
Solano Land Trust	2,110
Sonoma Land Trust	1,760
Tejon Ranch Conservancy	45,560
The Nature Conservancy	200,770
Tri Valley Conservancy	3,610
Wildlife Heritage Foundation	50
Yolo Land Trust	110
Subtotal	421,410
Public Agencies (Federal, State, and Local)	
California Department of Fish and Wildlife	40,200
California Department of Water Resources	23,780
California State University, Chico Research Foundation	2,750
Fairfield, City of	410
Natural Resources Conservation Service	1,950
Santa Barbara, County of	5,870
Santa Clara County Open Space Authority	300
Santa Clara County Parks and Recreation Dept., County of	28,080
Solano Irrigation District	1,930
Sonoma County Agricultural Preservation & Open Space Dist.	13,930
Other Public Agencies	250
Subtotal	**119,450**
TOTAL	540,860

and operations related to the production of forage and seeding, subject to certain restrictions. The Farm Service Agency administers the program.

NRCS also manages the **Wetlands Reserve Program** to help landowners protect, restore, and enhance wetlands. Lands eligible include, but are not limited to, wetlands farmed under natural conditions; farmed wetlands or wetland pasture; riparian areas that link protected wetlands; lands adjacent to protected wetlands; and wetlands previously restored under a local, State, or Federal program. Enrollment options include a permanent easement, a 30-year easement, a restoration cost-share agreement, and (on tribal lands) a 30-year contract.

The **Farm and Ranch Lands Protection Program** provides matching funds to keep productive farm and ranchland in agricultural uses. Working through existing programs, USDA partners with tribal, government, and non-governmental organizations to acquire farmland that, among other things, is part of a pending offer from a State, tribe, or local farmland protection program; privately owned; large enough to sustain agricultural production; and has surrounding land that can support agricultural production.

The **Central Valley Project Conservation Program (CVPCP**) and the Central Valley Project Improvement Act (CVPIA) **Habitat Restoration Program (HRP)** represent highly integrated efforts to restore and protect species and habitats impacted by the Central Valley Project. The CVPCP and HRP are managed cooperatively by the U.S. Bureau of Reclamation and the Service, and receive management input from the California Department of Fish and Wildlife. The CVPCP program is funded at between $2 and $3 million annually. Over 80 projects have been funded by the CVPCP since its inception, and more recent budgets are allowing for funding of five projects annually. The HRP program is usually funded at $1.5 million annually. The HRP has funded 116 different projects since its beginning, including several rangeland easements. More recent budgets have supported about five projects annually. Together, the CVPCP and HRP have provided over $7.5 million towards conservation easement acquisitions in the Rangeland Ring.

The **Partners for Fish and Wildlife Program** is the Service's habitat restoration cost-sharing program for private landowners. The program was established to provide technical and financial assistance to conservation minded farmers, ranchers and other private (non-federal and non-state) landowners who wish to restore fish and wildlife habitat on their land. The Partners for Fish and Wildlife Program emphasizes the restoration of historic ecological communities for the benefit of native fish and wildlife in conjunction with the desires of private landowners.

State

The California Wildlife Conservation Board (WCB) administers funds for the purchase of land and waters suitable for recreation purposes and the preservation, protection, and restoration of wildlife habitat. Two of the eight programs WCB manages are the **California Rangeland, Grazing Land and Grassland Protection Program** and the **Oak Woodlands Conservation Program**.

Through the use of conservation easements, the California Rangeland, Grazing Land and Grassland Protection Program prevents the conversion of rangeland, grazing land, and grassland to non-agricultural uses; protects the long-term sustainability of livestock grazing; and ensures wildlife, water quality, watershed, and open-space benefits to the State from livestock grazing. WCB encourages projects that address regional landscape issues. Proposals with funding partners may receive higher priority than those requesting 100% of the funds to acquire an easement.

The Oak Woodlands Conservation Program is a grant program to protect and restore oak woodlands using conservation easements, and cost-share and long-term agreements. This program provides incentives to landowners, conservation organizations, cities, and counties for projects that conserve and restore California's oak woodlands while sustaining the economic viability of farming and ranching operations.

Although its future is now in question, the **Williamson Act** has provided property tax relief for rangelands since 1965. Originally established to discourage unnecessary conversion of agricultural land to urban uses, it currently protects over 16 million of the State's 30 million acres of farm and ranch land. Within the six potential program area counties, nearly 70% of rangelands are enrolled in the Williamson Act, totaling over 2 million acres. The Williamson Act is administered locally through a unique three-way relationship between private landowners, local governments, and the State. Contracts have rolling 10-year term. Unless either party files a "notice of nonrenewal," the contract is automatically renewed for an additional year. In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather than potential market value. The Williamson Act is estimated to save agricultural landowners 20-75% in property tax liability each year. In 1998, further legislation established the Farmland Security Zone (FSZ) provisions. FSZ contracts offer landowners greater property tax reduction in return

for an initial contract term of 20 years. Since 2009, the State has stopped reimbursing counties for lost property tax revenue associated with this program, making its future tenuous.

In November 2006, California voters passed Proposition 84 (**Preservation of Ranches and Agricultural Lands Grant Program**) for the protection and restoration of rivers, lakes and streams, their watersheds, and associated land, water, and other natural resources. The Sierra Nevada Conservancy is administering $54 million of the Proposition 84 funds by funding local projects in partnership with eligible non-profits, tribes, and public agencies to preserve ranches and agricultural lands.

California Department of Fish and Wildlife created the **Private Lands Management Program**, which offers landowners economic incentives to manage their lands for the benefit of wildlife. Benefits to the landowner and wildlife resources are increased by allowing the landowner to maintain wildlife resources without an economic loss. Landowners who enroll in this "ranching for wildlife" program consult with biologists to make biologically sound habitat improvements that benefit wildlife, like providing water sources, planting native plants for food, and making brush piles for cover. In return for these habitat improvements, landowners can charge fees for wildlife viewing, hunting and fishing. This partnership between wildlife managers and private landowners helps conserve and maintain wildlife habitat in our state.

Land Trusts

Land trusts also play a critical role in preserving California rangelands through conservation easements. Most of the Federal and State programs described above grant funds to land trusts to acquire and hold easements. Land trusts active in the Rangeland Ring include regional, statewide, and national organizations that frequently partner on projects. They use donated easements, funded easements, mitigation easements, or a combination of the three to help protect open space, natural habitat, and agricultural values for future generations. Within the Rangeland Ring, at least 33 different land trusts hold easements totaling over 440,000 acres (Table 3).

California Rangeland Conservation Coalition

California Rangeland Conservation Coalition (CRCC) is a group of over 100 agricultural organizations, environmental interest groups, as well as state and federal agencies. The Service's Pacific Southwest Region and other signatories of the California Rangeland Resolution (http://carangeland.org/images/Rangeland_Resolution.pdf) have pledged to work together in the CRCC to preserve and enhance California's rangeland for species of special concern, while supporting the long-term viability of the ranching industry. The California Rangeland Resolution recognizes that California rangelands and the diversity of species they support is largely due to grazing and other land stewardship practices by the ranchers that own and manage them. The CRCC Strategic Plan lays the foundation for signatories to work together to target additional funding for conservation programs, coordinate permitting processes, garner support for voluntary and cooperative conservation projects, fulfill research gaps, conduct outreach on the positive role of managed grazing and provide incentives for the provision of ecosystem services.

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Grassland and Oak Woodland in the Tehachapi Mountains

Chapter 3. Conservation Priorities

With nearly 14 million acres of privately owned rangelands ringing the Central Valley, it is important to prioritize areas for potential easement acquisition to ensure that our limited resources can be used to conserve the highest value areas for wildlife. To that end, the Service conducted a broad-scale analysis and prioritization. The goal of this analysis was to identify general areas of privately-owned rangeland within the Rangeland Ring that have a high value to the Service's trust resources. Trust resources are those resources for which the Service has been given specific responsibilities under federal legislation, including migratory birds and federally listed threatened or endangered species.

The analysis consisted of the following major steps:

1. Selecting conservation targets (priority species and habitats),
2. Calculating the suitability of lands within the Rangeland Ring,
3. Identifying potential priority areas that minimize "cost" and maximize value to the conservation targets; and
4. Refining the priority areas based on the level of interest and support from landowners.

This broad-scale analysis utilized the most respected and widely-used conservation planning software tool available, Marxan (Ball *et al.* 2009). This tool allows resource managers to evaluate a nearly limitless number of possible scenarios in order to find the arrangement or arrangements of potential priority areas to conserve that maximize benefit while minimizing cost.

Conservation Targets

The first step in this planning process was to select conservation targets that represent the breadth of trust resources found within the study area rangelands. Conservation targets are the elements of rangeland ecosystems that we aim to conserve and include species, vegetation communities, and habitat features. For this assessment, we have two types of targets: species and habitats. Species were selected to represent each of the major vegetation classes within the Rangeland Ring. For migratory birds, the list of priority species was developed in consultation with Service Migratory Bird Program biologists to include birds that have an important portion of their breeding or wintering distribution in the Rangeland Ring that are:

Table 4. Rangeland habitat associations of CFLA Priority Species and Habitats.

Target	*Status*			*Rangeland Habitat Association*			
	PIF	*Fed*	*CA*	*Grasslands*	*Oak Woodlands*	*Riparian/ Wetland*	*Chaparral/Scrub*
Habitats							
Vernal Pools				X			
Botanically Distinctive Substrates (Serpentine, Gabbro, and Ione)				X			X
Species							
Nuttall's woodpecker (B)	MA	BMC			X	X	X
oak titmouse (B)	MA	BCC/ BMC			X		
loggerhead shrike (B)	MA	BCC/ BMC	BSC	X	X	X	
northern harrier (B)			BSC	X			
prairie falcon (W/B)	MA	BMC		X			
burrowing owl (B)		BCC/ BMC	BSC	X			
Golden eagle		P		X			
California condor	CR	E/ BMC		X	X		X
yellow-breasted chat (B)	MA		BSC			X	
yellow warbler (B)		BCC/ BMC	BSC			X	
California thrasher (B)	MA						X
Lawrence's goldfinch (B)	PR	BCC/ BMC					X
Tricolored blackbird	MA	BCC/ BMC		X		X	
San Joaquin kit fox		E		X			

PIF (Partners in Flight) Action Code: CR= Critical Recovery; IM=Immediate Management; MA= Management Attention; PR= Planning and Responsibility
Fed (Federal): E=Endangered; T=Threatened; P=Protected Under Bald and Golden Eagle Protection Act; BCC = Bird of Conservation Concern; BMC= Birds of Management Concern
CA (California): BSC= Bird Species of Special Concern

- U.S. Fish and Wildlife Service Birds of Conservation Concern, Birds of Management Concern, and birds protected under the Bald and Golden Eagle Protection Act;
- California Bird Species of Special Concern; and/or
- Birds categorized by Partners in Flight as needing Management Attention.

The two endangered species (California condor and San Joaquin kit fox) were selected due their dependence on rangelands and their ability to act as surrogates for a wide variety of other imperiled species. For example, the San Joaquin kit fox can be thought of as an umbrella species for many of the threatened and endangered species that occur along the lower elevation rangelands on the margins of the San Joaquin Valley (U.S. Fish and Wildlife Service 1998). Similarly, the two habitats (vernal pools, botanically distinctively substrates) were selected because they occur

primarily in the Rangeland Ring and are surrogates for a relatively large number of threatened and endangered, and other special status species that are restricted to these habitats (U.S. Fish and Wildlife Service 2005, U.S. Fish and Wildlife Service 2002).

The conservation targets selected are listed in Table 4. Appendix C maps show the distribution of these targets within the California Rangeland Ring. All of these conservation targets are either federal trust species or habitats that support numerous trust species, making them worthy of protection on their own. However, conserving habitat for these species also will protect habitat for numerous other species with similar habitat requirements.

We used a variety of sources to estimate the distribution of conservation targets within the study area. For breeding birds, we used two datasets provided by the California Avian Data Center: 1) which predicted current habitat suitability and 2) predicted as well as future (2038- 2070) habitat suitability based on regional climate model projections (Ballard et al. 2012). Predicted wintering habitat suitability for the prairie falcon was modeled from eBird data (eBird 2012) using the Maxent modeling technique (Phillips et al. 2006; Phillips and Dudik 2008). Predicted habitat suitability for California condor and San Joaquin kit fox also were modeled with Maxent using a historic condor observation database (Cogan 1993) and California Natural Diversity Database occurrence data, respectively.

To represent vernal pool distribution, we used a GIS dataset of vernal pool complexes (Holland 2009). Finally, unique botanical substrates (serpentinite and gabbro soils and Ione formations) were derived from a geological map of California (Luddington *et al* 2005) as well as data provided by the Bureau of Reclamation.

Cost and Suitability Factors

One of the most important variables used in the prioritization analysis is the "cost" of conserving a particular piece of land. As mentioned previously, the prioritization modeling software, Marxan, uses a mathematical formula which minimizes cost while maximizing the habitat conserved for all conservation targets over the entire conservation planning area. Therefore, developing the cost layer that is utilized by the software in those calculations is vitally important.

"Cost" as defined within the conservation planning framework can be any number of items and may not equate to the monetary cost of acquisition. Instead, it is a more general cost function which we related inversely to habitat suitability, or the degree to which a habitat remains intact or maintains ecological integrity. In our conceptual design, we identified areas with zero or low suitability as those that are urbanized or that have been converted to intensive agriculture such as row crops or orchards. With the recent interest in energy development in the southern part of the state, we also included energy projects in our analysis. We therefore developed a GIS dataset that included four suitability factors: housing density (2000 Census blocks), road density (weighted by class of road), energy development, and intensive agriculture (e.g., row crops, orchards, vineyards). These four datasets were combined into a single, weighted index of suitability (or conversely, cost). Areas with zero or low suitability have a very high cost and would include urban areas, intensively managed agricultural lands, and locations of existing or soon-to-be-developed energy production areas. Areas with the highest suitability and lowest cost, conversely, are therefore areas considered the most ecologically intact. They are not utilized for housing developments, energy production, or intensive agriculture and are farthest from paved roads.

Landscape Prioritization

As mentioned previously, the modeling approach that we developed to prioritize lands for conservation within the CFLA utilizes a highly respected, widely-cited, and peer-reviewed conservation planning tool called Marxan (Ball *et al.* 2009). Marxan is a software package developed in Australia originally for marine reserve design and used extensively in terrestrial environments as well. The purpose of Marxan is to evaluate a large suite of potential scenarios for prioritization within a broad area and to determine the optimal solution(s) based on a number of parameters including cost, connectivity and the degree to which all of the conservation goals are met. The cost in this case is not the monetary cost but an index of habitat suitability as described above. Marxan also includes a penalty factor in the model so that a solution that does not reach the goals set for each conservation target will be less highly ranked than a solution with an equivalent cost that does reach the habitat goals for all targets. And finally, Marxan includes an additional variable in the equation that relates to the degree of connectivity between priority areas.

Connectivity between protected areas is generally considered important for conservation (Margulles and Pressey 2000). We therefore chose to use a connectivity factor that encourages connections between different priority areas. We also built the priorities around currently protected grassland and woodland habitats so that additional habitat adjacent to those protected areas would be more likely chosen in the final prioritization. For all species and habitats

other than vernal pools, we chose a goal of 50%, meaning that the final prioritization would include 50% of the total distribution for the species or habitat type within the Rangeland Ring. For vernal pools, we chose a higher value of 75% to reflect the importance of this community and the large number of trust species which are contained within them.

The output of the analysis identifies those lands that are the most important for conservation. While the use of Marxan greatly increases the ability of planners to look at broad areas and identify those most important for the conservation of a particular suite of species and habitats, it is important to note its limitations and what it does not accomplish. First of all, the analysis does not provide an answer of the exact parcels to conserve. The outputs of the analysis are meant to be used as a general framework that will guide an overall conservation process. The scale of the analysis also is much coarser than is required to look at individual parcels. Therefore, additional factors would be used to prioritize parcels of interested landowners for potential easement acquisition. These factors are listed in the "Project Implementation" section below. Finally, this analysis will need to be updated periodically as new lands are conserved and others are converted into land uses that are unsuitable as habitat. The inputs used in the analysis are known to change over time and therefore must be reanalyzed as new data becomes available. This is especially true of the climate change models which were used to develop predictions of bird distributions under variable future conditions. As those models are refined and improved, the predictions they provide will change and the prioritization will need to be updated accordingly.

Landowner Interest and Support

Initial indications of the level of landowner interest and support was obtained through the scoping process and was incorporated in the development of proposed alternatives. The level of landowner interest and support though not a biological factor in setting our conservation priorities still contributes to the likelihood of the Service successfully implementing a conservation program that requires voluntary involvement by landowners.

Parcel Prioritization Factors

As described above, outputs of the landscape prioritization analysis are meant to be used as a general framework that will guide the conservation process, and do not identify specific parcels for potential conservation or easement acquisition. Therefore, the following additional factors would be used to prioritize parcels among interested landowners:

Documented presence of priority species and/or habitats (most important)

- Documented presence of one or more migratory bird species listed in Table 4
- Presence of vernal pools complexes
- Presence of serpentine, gabbro, and/or Ione formations and associated plant communities
- Presence of threatened or endangered species

Acreage of parcel(s)

- Total acreage of contiguous ranch parcels
- Acreage of adjacent conserved rangelands (easement or fee)

Level of Conversion Threat in Region

- Acreage of areas mapped as grazing land in county converted to other land uses according to the two most recent Farmland Mapping and Monitoring Program surveys
- Acreage of Williamson Act cancellations on non-prime land (rangeland) within county over last 5 years

Presence of features that promote resilience to climate (Klausmeyer et al 2011)

- Elevation range
- Topographic diversity
- Presence of permanent water sources
- Presence of forested riparian corridors

Foothill Grasslands in Summer

Chapter 4. Project Implementation

The proposed program boundary was based on the relative importance of rangelands to wildlife as well as the level of interest expressed by ranch owners throughout the California Rangeland Ring. The program boundary defines the area within which the Service may negotiate with landowners that may be interested in selling easements on their land in the future.

If the proposed easement program is approved, the Service may contact landowners to determine whether any are interested in participating in the program. If a landowner expresses an interest and gives permission, a real estate appraiser would appraise the property to determine its market value. Once an appraisal has been approved, an offer can be presented for the landowner's consideration.

The Service's long-established policy is to work with willing sellers as funds become available. Appraisals conducted by the Service or by contract appraisers must meet federal as well as professional appraisal standards. Federal law requires the Service to purchase properties at their market value, which typically is based on comparable sales of similar types of properties.

Rangeland Conservation Methods

Three methods of acquiring an easement interest in the parcels identified for Service land protection are detailed below. They are: (1) purchase (i.e., conservation easement), (2) donation, and (3) exchange.

Easement Purchase: For rangelands within the project boundary, the proposed acquisition method is *Easement*. Easement purchase refers to the purchase of limited rights (less than fee) from an interested landowner. The landowner would retain ownership of the land, but would sell certain rights identified and agreed upon by both parties. The objectives and conditions of proposed conservation easements would recognize lands for their importance to wildlife habitat.

Donation: Donations of conservation easements within the program area would be encouraged and welcomed. The Service is not currently aware of any formal offers to donate parcels in the program area.

Exchange: The Service has the authority to exchange land in Service ownership for other land that has greater habitat or wildlife value. Inherent in this concept is the requirement that the parcels being exchanged be of equal monetary value. In some cases, an equalization payment may be required to balance the exchange.

Easement Terms and Requirements

The Service has had a successful wetland easement program in the Central Valley for over 30 years. Drawing from this experience, and based on a review of a variety of existing federal and non-federal rangeland easements, we developed a draft easement template (Appendix B). The easement template is the starting point from which we negotiate easement terms with individual landowners. Our conservation easements are customized to fit a landowner's individual situation, and the terms of the easement are established only after detailed discussions between the landowner and the Service. We provide the easement template to give landowners an idea of the terms and types of restrictions a CFLA easement would typically include.

Funding for Easement Purchase

The Service would primarily acquire easements in the CFLA with Land and Water Conservation Fund monies. These funds are not derived from general taxes, but rather from revenue generated from federal oil and gas leases on the Outer Continental Shelf, motorboat fuel taxes, and the sale of surplus federal property. While Land and Water Conservation Fund monies are intended for land and water conservation projects, funding of specific acquisition projects is subject to annual appropriations by Congress. If it is reauthorized by Congress, the Federal Land Transaction Facilitation Act also could be used to fund specific acquisitions. This act is a law that allows the Bureau of Land Management to dispose of certain public lands in order to generate revenue for strategic conservation of habitat not currently in federal trust. Other sources of funding to purchase easements are the Migratory Bird Conservation Fund (MBCF), which derives from Federal Duck Stamp revenue, and the North American Wetlands Conservation Act, which awards funds to wetland conservation projects for the benefit of wetlands-associated migratory birds and other wildlife.

Landowner Compensation

When entering into a conservation easement with the Service, landowners would be financially compensated for the fair market value of the easement. The fair market value of a conservation easement is determined through an appraisal process. An appraiser estimates how much the land would sell for unencumbered by the conservation easement (the "before" value) and how much the land would sell for with the conservation easement in place (the "after" value). The value of the conservation easement is equal to the before value minus the after value, or the difference in the fair market value of the property with and without the easement. Landowners also may choose to donate conservation easements to the Service. The donation of a conservation easement may qualify as a tax-deductible charitable donation, which may result in federal income tax benefits. The sale of a conservation easement for less than its fair market value (called a "bargain sale") also may qualify for tax deductions. Landowners may be able to claim a charitable income tax donation equal to the difference between the fair market value and the bargain sale price of their easement. Income from the sale of a conservation easement may be taxable.

Conservation easements reduce the value of an encumbered property. A conservation easement will reduce the fair market value of an estate, because the easement permanently removes some of the estate's development potential and may place additional use restrictions on the land. The reduction in value depends on the potential development value of the land and the level of restriction agreed upon in the easement. In general, an easement on land located in an area with high development pressure will have a greater effect on the value of the land than an easement on land located in an area with low development pressure. The Service will purchase easements at their appraised fair market value; therefore, easements on lands with high development pressure will receive higher payments.

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